

AF/3635

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Yoshiwara et al

Appeal No. _____

Serial No.: 09/818,851

Group Art Unit: 3635

Filed: March 28, 2001

Examiner: Amiri, Nahid

For: Manufacture and Use of Earthquake Resistant Construction Blocks

REPLY BRIEF

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GROUP 3600

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Honorable Members of the Board of Patent Appeals and Interferences:

This Reply Brief is in response to the introduction of misleading, erroneous arguments and perceptions made by the Examiner in his Examiner's Answer mailed April 1, 2004.

The Examiner's Answer, for the most part, addresses the reasons your appellant set forth as shortcomings with the use of the patent to Kirkpatrick, U.S. 1,487,578, issued on March 18, 1924, as a reference under 35 USC 103 as set forth under i - v and A-K of pages 12-17 and 18 - 26 respectively in the appellant's Brief. However, there is an aspect of the Examiner's Answer that permeates Kirkpatrick shortcomings for most if not all of A-K and in particular I - K in Appellant's Brief. A summary of the misleading, erroneous arguments and perceptions are

exemplified in the Examiner's Answer in two paragraphs, one sharing pages 11 and 12 and the other on page 12. The Examiner states:

"In regard to section I, the appellant argues that the examiner has their personal opinion to interpret the claims. As pointed out above in the rejections and remarks, the examiner has made it quite clear that he is not relying on his personal opinion. The examiner is relying on the disclosure and drawings of Kirkpatrick's invention as well as what is notoriously well known in the art. The examiner has not made any reference to his personal opinion of the Kirkpatrick reference.

In regard to section J, the appellant argues that the examiner used hindsight to reject the claims. In response to this argument, the examiner would like to point out that, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). Therefore, since the examiner did not rely on anything that was not shown or disclosed in Kirkpatrick's invention, the examiner did not rely on hindsight. The examiner merely examined the claims by giving them their broadest possible interpretation."

The facts in this case are that without personal opinions coupled with the wild imagination of the Examiner in evaluating the simple two-figure, one page disclosure of Kirkpatrick, this case would not be before the Board of Appeals.

- a. The Examiner is of the erroneous opinion that the claim preamble can be ignored.

The Examiner is of the opinion that the earthquake resistance recited in the preamble can be ignored because the structure of the claim can stand alone and merely recites purpose or intended use (page 5, lines 4-11 of the Examiner's Answer). The fact of the matter is that the gist of the claim provides the structure that yields earthquake resistance. Further, within the body of

claim 1 it states, in lines 10+, that the structure provides “a strong resistance to horizontal vibrations of an earthquake applied to said side surfaces by transfer forces directly from one aggregate to another throughout said construction block lower extent.” The preamble is directed to more than wishful thinking. It and the structure recited in the claims are the inherent interrelated crux of the invention. The claim addresses the structure that yields this useful functional result. The preamble is an integral part of the claims that cannot simply be ignored.

b. The Examiner is of the erroneous opinion that the size of the aggregate can be ignored.

The Examiner is of the erroneous opinion that use of aggregate in excess of 5 cm circumference is obvious. He states on page 4, lines 21 and 22, of the Examiner’s Answer: “Kirkpatrick does not specifically disclose that said circumferences are in excess of 5 cm” as required by base claims 1 and 13. It is the Examiner’s personal opinion that:

“It would have been obvious to one having ordinary skill in the art at the time the invention was made to use aggregate pieces having circumferences in excess of 5 cm because said pieces will create firm contact between the aggregate pieces in order to transfer vibrations.” (Emphasis added, page 4, line 22 - page 5, line 3).

Kirkpatrick obviously considers his aggregate size to be irrelevant since no size range has been provided. The only function of his aggregate is that it be visible to an observer. The Examiner’s pronouncement of obviousness of the aggregate circumference in excess of 5 cm because “said pieces will create firm contact between the aggregate pieces in order to transfer vibrations,” is a self-incriminating statement. Only a personal hindsight opinion could result in the

statement that the circumference of the aggregate pieces is obvious or irrelevant since Kirkpatrick never mentions “firm contact” or the “transfer of vibrations.” Only the claims under consideration recite these structural limitations and function they perform. The aggregate limitations and their use obviously come directly from the claims and not the prior art or a mechanic in the art.

The Examiner’s obviousness of the rock size for transfer of horizontal vibrations can only be based on your appellant’s recognition of the problem and solution of that problem.

c. The Examiner is of the erroneous opinion that the aggregate materials used are obvious.

The Examiner on page 5, lines 12-19, of the Examiner’s Answer addresses claims 8, 9, 11 and 12 and points out that while Kirkpatrick does disclose “crushed rock or the like, line 43,” the above aggregates are notoriously well known in the prior art by those having ordinary skill for being used with concrete structures. Therefore, the phrase “or the like” in Kirkpatrick’s disclosure would be interpreted by one having ordinary skill in the art as including the above aggregates since they are so widely used in the concrete art.” (Emphasis added.)

1. The present disclosure specifically states that the aggregates have been tried in the past but were not considered useable in the art because they were found to be inferior.

In your applicant’s specification on page 1, in the “Field of the Invention” it states that: “Materials generally considered to be discardable or of limited value are used” and the last

paragraph, page 3 of the specification, for example, addresses the limited use of these low quality materials because they are not recognized as material fit for construction work.

2. The specific aggregates have been found by your appellant to be useable as earthquake resistors despite their reputation as being inferior materials to be avoided for construction use.

3. If the claimed aggregates were as notoriously well known as the Examiner proclaims, he would have no problem finding prior art disclosing their use.

4. There has been no showing of any aggregates used for earthquake resistance, let alone the specific materials recited in claims 8, 9, 11 and 12 and no showing of firmly packed aggregates of any type for earthquake resistance.

In view of 1 - 4 above, the Examiner's statement can only be a hindsight personal opinion. In view of the present specification addressing at length that these materials are not used because of their inferior quality, it is incumbent upon the Examiner to show by facts placed in the record 1) that these materials are in fact desirable, and 2) that they are materials in common use, and 3) that they yield earthquake resistance. Under these circumstances the Examiner's opinion is not a substitute for facts.

d. The Examiner is of the erroneous opinion that the aggregate pieces of Kirkpatrick are in firm contact with each other.

Kirkpatrick discloses that "crushed rock or the like is placed in a form, and the crevices between the rocks are filled with smaller rocks, after which the cement is poured into the form."

(Lines 43 - 46). There is no disclosure as to the spacing between the rocks and there is no disclosure that the larger rocks are in contact with each other. What is disclosed is that there are crevices between the larger rocks. By definition a crevice is “a narrow crack or split.” (New Websters Dictionary and Thesaurus of the English Language copyright 1993 by Lexicon Publications Inc.)

This absence of firm contact is clear from Fig. 1 of Kirkpatrick where some of the rocks appear to not even be in contact with each other and for certain are not placed firmly in contact with one another even if it can be speculated that the rocks shown are all in the same plane, i.e. some of the rocks may be positioned at some distance behind adjacent rocks.

If the English language is to be applied, Kirkpatrick discloses that the rocks do not even touch because a narrow crack or split exists between the rocks placed in the form. This logical and literal interpretation of the Kirkpatrick reference precludes the Examiner’s unsupported, speculative opinion that the rocks are in “firm abutting contact with each other.” Apparently in agreement that this may be so, the Examiner falls back to Kirkpatrick disclosing that small rocks are placed in the crevices between the larger rocks (lines 44-45). Kirkpatrick does not teach the aggregate pieces to be in firm contact, only your appellant’s claims teach firm contact.

e. The Examiner is of the erroneous opinion that the aggregate pieces of Kirkpatrick are on the “bottom surface” and not a front face.

In the full paragraph on page 8 and the paragraph sharing pages 8 and 9, of the Examiner's Answer, the Examiner disputes your appellant's stating the aggregate of Kirkpatrick is in the front face. He says the aggregate is on the lower surface.

Kirkpatrick provides a block with a crushed rock veneer face 10 (lines 35-39) with reinforcing element 16 arranged longitudinally immediately adjacent the veneer face (lines 46-49). This makes the veneer face everything below the reinforcing element 16 in Fig. 1 a part of the face by inventor's disclosure. The elements 17 are provided with spaced eye or loops 18 that project from the rear face of the block (lines 52-56). This makes the outermost surface of the veneer face 10 a front face by application of logic and common sense. This is confirmed in Fig. 2 where the front surface of the veneer face 10 protrudes outward to view and loops 18 are in the rear for tie wire 19 securement (lines 59-63). There is nothing complicated about this disclosure by Kirkpatrick. He provides the block A with a front face and a rear face.

The Examiner is free to call the veneer face a "lower surface" only by converting the three dimensional veneer face described by Kirkpatrick into a two dimensional surface (having no depth) and is free to ignore Kirkpatrick defining his veneer face as commencing at the reinforcing element 16 only by ignoring the accepted and dictionary definition of "veneer." By definition it usually refers to three dimension wood laminates but includes "any refined outer covering concealing a coarse structure or a superficial show." New Websters Dictionary and Thesaurus of the English Language copyright 1993 by Lexicon Publications Inc. The Examiner's opinion of what the Kirkpatrick reference teaches goes beyond any known or accepted standard of reference

interpretation and any known or accepted use of the English language. The concept of broad interpretation does not mean that the limits extend as far as one person's imagination can take them. A veneer face is a finite depth layered structure, a surface is not, even though the veneer face has a front surface.

The veneer face of Kirkpatrick is composed of three separate structural layers (the concrete rear layer that holds the small rock layer and the large rock layer in place). This veneer face may have a front surface but this surface is not the veneer face. It is only the outer extreme of the veneer face. The outer extreme of the veneer face is a front face of the block A and not a bottom surface.

f. The Examiner is of the erroneous opinion that the chamfer of Kirkpatrick forms a side of the block.

A 45 degree chamfer extends between the block A sides and the front face or outermost extent of the veneer face 10 as seen in Figs. 1 and 2. The Examiner insists that the chamfer, or mold from which it was formed, is a part of the side of the block A (Examiner's Answer page 4, lines 15-16 and page 6, lines 4 - 6). There is no support within the specification or drawings of Kirkpatrick to support the Examiner's position. There is ample evidence that the chamfer is on the front veneer face of the block.

The Examiner speculates that since the mold would leak if there were nothing to hold in the rocks and cement of Kirkpatrick at the chamfer area, it has to be a side of the block, (last paragraph on page 6 and paragraph sharing pages 9 and 10 of the Examiner's Answer).

Kirkpatrick unequivocally describes and shows the chamfer to be a part of the veneer face. Kirkpatrick's disclosure of his front veneer face is reviewed in detail in e. above. The chamfer is described as being a part of the veneer face. The chamfer begins at the reinforcement 16 back side, of the veneer face, and ends at the front outermost surface of the veneer face. The sides of the block A of Kirkpatrick end where the veneer face begins, as clearly seen in both Figs. 1 and 2. The chamfer cannot be considered to be a side surface of the block A since it is the outer sides of the veneer face. The chamfer may be the sides of the veneer face but it is not the sides of the block as clearly disclosed by Kirkpatrick.

g. The Examiner is of the erroneous opinion that the aggregate pieces are in firm contact with the block sides.

In the Examiner's Answer, the Examiner concludes that "...the mold obviously has an upper and lower extent in the desired shape of a construction block, and mold sides in contact with said aggregate. This is so because in order for the mold to hold the aggregate and cement, it must have sides to prevent ... spilling. ... since the chamfered portions of the block are part of the sides of the block, and the aggregate is on part of the chamfered sides, the aggregate was obviously in contact with the side of the form that formed the chamfer." (Emphasis added. Page

6, lines 15-21). The Examiner insists on calling the chamfer a part of the sides and on page 10 states that Fig.1 clearly shows at least the first row of rocks in firm abutting contact, and that their forwardmost surfaces are clearly in contact. Therefore, since the rocks are in contact any force acting on one rock will obviously be transferred to an adjacent rock, (page 10, lines 1 - 5).

Figs. 1 and 2 of Kirkpatrick clearly show that there is no way for lateral forces to reach the aggregate even if they were in “firm contact with each other,” which they are not (as pointed out in d. above).

The Examiner’s logic is that the chamfer is a part of the block sides, since the aggregate contacts some of the chamfer, it contacts the sides. “since it can clearly be seen in figure 1 that the aggregate pieces are at least partially embedded in the sides of the block, they must be in contact with the chamfered side part of the form that formed the side chamfer on the block sidewall.” (Examiner’s Answer, page 9, lines 14-18.)

Fig. 1 clearly shows that the aggregate of Kirkpatrick only extends ½ of the way from the veneer outermost face to the veneer face rearmost extent and thus the aggregate stops ½ the diameter of the chamfer from reaching the block sides. The aggregate does not extend all the way to the block sides and thus does not extend between the block sides.

h. The Examiner is of the erroneous opinion that the claimed structure is taught by Kirkpatrick

Claim 1 requires:

- i. aggregate pieces within the block lower extent.
- ii. aggregate pieces having a circumference in excess of 5 cm.
- iii. aggregate pieces extending from and between block sides.
- iv. aggregate pieces providing strong support for vertical forces, and resistance to horizontal vibrations of an earthquake applied to the side surfaces.

Kirkpatrick discloses:

- i. aggregate pieces within the block front face.
- ii. aggregate pieces of unknown size.
- iii. aggregate pieces extending from the lower extent of the chamfer on the block front face that do not extend to the block sides.
- iv. no structure that will conduct vibrations between the sides of the block.

The Examiner states on page 11, lines 14-20: “In section H, the appellant argues that Kirkpatrick addresses problems and functions that are foreign to those of the appellant’s invention. The examiner would like to point out that both inventions are drawn to a concrete block having aggregate embedded in a surface of said block. Therefore, since both Kirkpatrick and the claimed invention have the same limitations, they will obviously be capable of performing the same functions. Once again, the applicant is only claiming a single block. As stated above, a single block could have hundreds of uses. The use does not define the block. The structure does, (emphasis added).”

The dictionary definition for concrete is “a hard strong substance made by mixing sand and gravel or crushed stone with cement and water, used as a building and construction material ...”
(New Webster's Dictionary and Thesaurus of the English Language copyright 1993 by Lexicon Publications Inc.)

It appears that the Examiner considers the patent to Kirkpatrick (placing aggregate on the face of a block used to form the face of a wall) and the claimed invention (arranging aggregate in firm contact with the sides and each other and the base to form an earthquake resistant structure) to be the same structure. It appears to your applicant that the dictionary definition of concrete would be as good a reference as the patent to Kirkpatrick is.

The claims are limited to the aggregate being in 1) firm contact and 2) adjacent to the base and 3) having a circumference in excess of 5 cm and 4) extending to and in firm contact with the sides. The small rocks of Kirkpatrick alone or in combination with the large rocks do not meet these 4 claim requirements. The structures are not the same.

i. The Examiner is of the erroneous opinion that the Kirkpatrick structure is capable of resisting earthquake vibration.

It is the claimed structure that provides or enables the block to resist earthquake vibrations. How the Examiner can be of the opinion that “the intended use of the aggregate does not result in a structural difference between the two blocks” is at best presumption (paragraphs

sharing pages 7 and 8 and full paragraph on page 8 of the Examiner's Answer). It is your appellant's opinion that no mechanic in the art with any skill or common sense would equate the structure disclosed by Kirkpatrick to be the same as that disclosed in claim 1 to be equivalent, or foolish enough to rely on Kirkpatrick's structure to resist the vibrations from an earthquake.

It is the firm contact of the aggregate from and between the sides of the blocks that yields the resistance to earthquakes. Kirkpatrick teaches neither firm contact between his aggregate nor aggregate in firm contact with the sides of his blocks and precludes such contact and force transfer with his aggregate by incorporation of the chamfer.

j. The Examiner is of the erroneous opinion that the Kirkpatrick manufacture process is the same as that claimed.

On page 6, first paragraph, lines 4 - 14, the Examiner states that Kirkpatrick teaches: "positioning ... so that said aggregate pieces are in firm contact with said mold sides and in firm contact with each other throughout said mold ... and form a block having a strong resistance to vertical forces ... and a resistance to horizontal vibrations of an earthquake by transferring forces applied directly from one aggregate piece to another ..., lines 43 - 57 and figure 1 show the aggregate pieces in firm contact...because said pieces will create firm contact between the aggregate pieces in order to transfer vibration."

The structural differences between Kirkpatrick and all the claims is set forth in h. above. A basis for each of the steps of positioning the aggregate in firm contact with the mold sides, and with each other, and formation of strong resistance to horizontal vibrations and transfer of force from one aggregate piece to another can only be found in your appellant's claims. The Examiner has made a recitation of your appellant's process steps for earthquake resistant blocks as being taught by Kirkpatrick. The patent to Kirkpatrick does not even come close to teaching your appellant's process steps.

Kirkpatrick does not teach the steps of:

- i. placing aggregate in excess of 5 cm circumference.
- ii. positioning the aggregate in firm contact with the mold sides.
- iii. positioning the aggregate in firm contact with each other.
- iv. positioning the aggregate to form a lower surface.
- v. pouring in mortar to maintain the aggregate position and form strong resistance to vibrations from earthquakes.

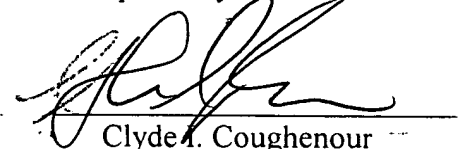
The patent to Kirkpatrick does not teach the claim steps and the Examiner has not pointed out where the steps can be found in Kirkpatrick's disclosure. The Examiner's erroneous personal opinion of what he thinks the drawings show, in conflict with the disclosure of Kirkpatrick, does not amount to factual teachings in the art.

k. The Examiner's concern for reasons for the allowability of the subject matter of claim 2, etc. (found on page 7, lines 9-20 of the Examiner's Answer) is confusing and considered irrelevant. As a practical matter, it appears that Fig. 2 of Kirkpatrick shows an end view of the blocks A represented in Fig. 1. As can be seen in both views, the aggregate in the veneer face never reaches more than $\frac{1}{2}$ the distance between the veneer front face ends and the block sides.

CONCLUSION

The Examiner's rejection of claims 1, 8 -13, and 19 is based on erroneous personal opinion and not facts of record or structure and steps taught by Kirkpatrick. The rejection of claims 1, 8 - 13, and 19 should be reversed and such action is earnestly solicited.

Respectfully submitted



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